of lifetime direct medical costs for first-ever stroke patients can have implication in public health policy planning and clinical decision making.

RESEARCH ON METHODS – Databases & Management Methods

PRM49

COMPARISON OF COMORBIDITY MEASURES TO PREDICT ECONOMIC OUTCOMES IN A LARGE UK PRIMARY CARE DATABASE

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OBJECTIVES: Several indices have been developed to adjust for the effects of comorbid conditions in observational studies. This study aimed to determine which among selected indices provides the optimal covariate in cost analyses assessing resource utilisation between different treatment strategies using a UK primary care database. **METHODS:** A retrospective analysis of UK patients continuously registered with a single general medical practice between 01/01/2007 and 01/01/2011 was conducted using the Clinical Practice Research Datalink GOLD dataset (CPRD). Three comorbidity indices were compared: the Charlson Comorbidity Index, original version (CCI) and 2008 adaptation (CCI-2008), and the Quality Outcomes Framework (QOF). In addition, we considered a bespoke index based on an unweighted count of diseases included in the Charlson indices. Two resource use outcomes were analysed: 1) the monthly frequency of primary care consultations; and 2) annual count of biological tests reported over the calendar year 2010. The sensitivity of the comorbidity indices were evaluated for three different look-back periods: 12, 24 and 36 months. For each outcome, we fitted mixed linear regression models with comorbidity index, age and gender as fixed-effects factors and covariates, and general practice as random intercept. Comorbidity indices were ranked according to goodness-of-fit, assessed by R2 and Akaike's Information Criterion (AIC). **RESULTS:** 4,694,610 patients were included in the analysis. The CCI-2008 ranked highest based on correlation with both consultations (R2=0.11) and tests (R2=0.16), followed by the CCI (R2=0.09 and R2=0.14 for consultations and tests respectively) and then the QOF measure (R2=0.08 and R2=0.11 respectively). Unweighted counts of comorbidities showed similar AIC and R2 as their weighted counterparts. The same ranking was observed over the three co-morbidity look-back periods. **CONCLUSIONS:** The CCI-2008 performed better than CCI and QOF to predict units of primary care resource utilisation observed in UK general practice. Further analyses will determine whether these findings are confirmed when predicting health resource use costs and if reproducible in other health systems with alternative data collection methods such as claims databases.

PRM50

EFFECT OF FINGOLIMOD ON DISEASE PROGRESSIONS, RELAPSE RATE AND BRAIN ATROPHY IN MULTIPLE SCLEROSIS PATIENTS: REVIEW OF LITERATURE AND PHARMACOECONOMIC CONSIDERATIONS

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OBJECTIVES: Multiple sclerosis (MS) is a degenerative neurologic disease that seriously affects patients' quality of life. Fingolimod is a sphingosine-1-phosphate modulator that traps lymphocytes in lymph nodes with neuroprotective effects. Our objective was to review the available evidence regarding its efficacy in disease progressions, relapse rate and brain atrophy and link it to possible phamaeconomic effects. **METHODS:** A systematic review of literature was performed in MEDLINE and Scopus. We included primary studies comparing fingolimod to placebo or other drugs regarding its efficacy in disease progression, relapse rate and brain atrophy. Retrospective designs and studies focusing on specific populations were excluded. Data regarding the outcomes of interest were extracted and processed with Review Manager 5.3. Results were presented with forest plots, and heterogeneity analysis was performed. We performed a literature review to assess the possible effect of these clinical outcomes in terms of costs and quality adjusted life years (QALY) in the Colombian context. **RESULTS:** From the 1,344 references originally identified, only 3 had useful information. Two were placebo-controlled and the other one used interferon ß1a (IFß1a) as control. Information was available for 1.25 mg and 0.5 mg fingolimod dosing. Statistically significant differences in favor of fingolimod were found in annualized relapse rate, brain volume change, percentage of relapse and disease progression-free patients compared to placebo or IFß1a. Results EDSS and MSFC scales change were favorable to fingolimod but not statistically significant. Using data from various sources, we estimated that Colombian patients treated with fingolimod for 5 years might avoid a loss of 0.145 QALY and $ 5,029 of direct and indirect costs. **CONCLUSIONS:** Fingolimod is superior to placebo and IFß1a in disease progression, relapse rate and brain atrophy. More studies are warranted, especially comparing fingolimod to other drugs. The estimated pharmacoeconomic effects are promising but must be interpreted with caution.

PRM51

ONCOLOGY LITERATURE BANK FOR CANCERS AND THERAPIES FOR HEOR: CONCEPT AND UTILIZATION OF ONCOLITBANK

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OBJECTIVES: We created OncoLitBank, to capture data from clinical trials, patient reported outcomes (PRO) studies,and Health Technology Assessments (HTAs) in oncology. The registry is aimed to provide efficient access, and comprehensive analyses of data for the evolving landscape of chemotherapy agents. **METHODS:** A systematic literature search was conducted on PubMed for chemotherapy compounds by cancer indications that were either FDA-approved or National Comprehensive Cancer Network (NCCN) recommended. The search was limited to studies published between 1960 and 2015 in English language. Phase II, III or IV clinical trials with atleast one study arm assessing a treatment of interest were included. PRO studies (not limited to RCTs) reporting quality-of-life (QoL) data for these compounds were included. Additionally, information was extracted from product package inserts of molecules within FDA indication. Archives of 27 HTA bodies were searched for qualifying HTAs of these compounds as well. Patient characteristics, primary and secondary endpoints, safety, QoL and reimbursement decisions were extracted exhaustively from qualifying studies and HTAs. **RESULTS:** So far, data are available for 15 cancers, including 90 agents in 487 studies. The interactive, user-friendly MS-Excel® based tool can be used to study any selected cancer, including conduct meta-analyses, generate summaries and reports of clinical, PRO and HTA data. The registry provides functionality for a user to make desired assessments via multiple variables such as line of treatment, tumor-stage, molecule, grade of adverse events and so on. **CONCLUSIONS:** OncoLitBank provides up-to-date data and a robust platform that can be easily used for systematic reviews, to conduct direct and indirect comparisons through meta-analyses, to inform economic models, perform landscape analyses, produce value dossiers,and to create target product profiles and value development plans. Expansion of searches to other literature databases and trial registries and inclusion of economic and epidemiology studies are underway.

PRM52

GENERATING COSTING ALGORITHMS FOR ONCOLOGY DRUGS USING ADMINISTRATIVE DATABASES

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OBJECTIVES: To generate costs and costing algorithms for treatment and supportive drugs in oncology using provincial (Ontario) administrative databases. **METHODS:** A cohort of women diagnosed with breast cancer (BC) (ICD-9 174.x) was identified from the Ontario Cancer Registry (2007-2010). Firstly, the Ontario Drug Benefit Formulary (ODBF), New Drug Funding Program (NDFP) and Activity Level Reporting (ALR) databases was used in which BC-specific treatments (chemotherapies and hormonal therapies) and supportive drugs were identified. Secondly, unit costs were applied to calculate the overall and per drug costs in each database. Lastly, costing algorithms were generated to conduct the costing analyses. **RESULTS:** We identified 30,338 women diagnosed with BC. All chemotherapies and hormonal therapies were named as well as anti-nausea, pain (opioid and non-opioid), anti-infectives, and blood products for supportive drugs. Outputs include number of patient cases with at least one treatment or supportive drug being utilized and total costs. Preliminary results for the 20,076 BC cases prescribed a drug in ODBF totalled $69.5 million in which $37.5 million was treatment-specific. **CONCLUSIONS:** We have generated preliminary ODBF costs for oncology drugs in BC and costs for the NDFP and ALR databases will be determined next. These costing algorithms will allow for the calculation of oncology treatment and supportive drug costs in different cancer cohorts.

PRM53

"BIG DATA" IN ALZHEIMER'S DISEASE RESEARCH: AN ENVIRONMENTAL SCAN

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OBJECTIVES: Repositories of "big data" have the potential to play a pivotal role in advancing Alzheimer's disease (AD) research. Globally, AD-specific data are being generated and aggregated into research databases. An environmental scan was conducted to identify worldwide AD-specific databases and types of data being aggregated and used for AD research. **METHODS:** A Google search was conducted monthly starting in September 2014 to present. For each database, its URL, geographic location, funding source, and type of data collected and/or stored were identified. A categorization scheme was established to classify types of data. Three reviewers independently categorized the data as: 1 = claims, 2 = laboratory, 3 = genetic, 4 = imaging, 5 = patient/caregiver-reported questionnaires, 6a= longitudinal study, 6b = patient registry, 7 = clinical data, 8 = electronic medical records, 9 = neuropathology, and O = other. A fourth reviewer resolved discrepancies. **RESULTS:** A total of 53 AD databases were identified, both within (28/53) and outside the U.S. (21/53). Sources from outside the U.S. include United Kingdom, Australia, Belgium, France, etc. Four databases represent U.S. and non-U.S. collaborations. The National Institutes of Health is the most common funding source (14/53). Clinical data were found to be the most common (30/53); whereas, databases containing AD-specific claims data appear to be lacking. Additional gaps include a comprehensive database linking claims data with patient-level data from AD longitudinal studies, patient registries, electronic medical records, or genetic data. Patient registry databases lack pre-diagnosis and early-life data, as they enroll patients upon diagnosis with AD or mild cognitive impairment. **CONCLUSIONS:** Various types of data are being aggregated into numerous AD-specific research databases worldwide. However, gaps exist that may limit the utility of these databases in making advances in the AD research. Efforts are needed to explore opportunities to merge and expand these databases to fill these critical gaps.

PRM54

PHARMACEUTICAL PRODUCTS AND VACCINES DISCUSSED IN SOCIAL MEDIA: WHICH ONES ARE PATIENTS TALKING ABOUT?

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OBJECTIVES: Social Listening through digital media may offer a unique opportunity to enhance traditional pharmacovigilance strategies. The objective of this pilot study was to evaluate the breadth of pharmaceutical products and vaccines most commonly discussed on Facebook and Twitter and how these data may inform future research in this area. **METHODS:** Publically available Facebook and Twitter posts